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ABSTRACT

This collection of abstracts is part of a continuing series providing information on recent doctoral dissertations. The 25 titles deal with a variety of topics, including the following: reading achievement as it relates to child dependency, the development of phonological coding, short-term memory and associative learning, variables available in school records, haptic and related perceptual functioning, auditory memory, home environment among black pupils of low socioeconomic status, and cognitive development and language development; interaction of a visual form integration task on word recognition; the relationship between reading gain and school behavior among fourth, fifth, and sixth grade disabled readers; performance of high, moderate, and low reading subjects on a read and record task; predictors of reading achievement; comparison of first grade readers and nonreaders on use of linguistic cues for identifying words; self-perceptions of reading abilities related to achievement, attitudes toward reading, and cognitive styles; finger agnosia in disabled children; characteristics of productive control of English language structures in comprehension; communication processes in families with disabled readers; testing linguistic competence with cloze procedure; spelling skills; play behaviors; characteristics of successful and unsuccessful learning disabled students; and comprehension of syntactic structures. (TJ)

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Reading Achievement: Characteristics Associated with Success and Failure:

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A STUDY OF THE RELATIONSHIP OF CERTAIN HOME ENVIRONMENTAL FACTORS TO HIGH OR LOW ACHIEVEMENT IN READINC AMONG BLACK PRIMARY SCHOOL AGE PUPILS OF LOW SOCIOECONOMIC STATUS

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A STUDY OF THE RELATIONSHIPS BETWEEN CHILD DEPENDENCY AND READING ACHIEVEMENT IN THIRD-GRADE CHILDREN Order No. 7812256

ANDERSON, Marcella S., Ed.D. Temple University, 1978. 162pp.

The relationships of one personality aspect, dependency and dependency's maternal antecedents, were explored within a range of reading achievement. Additionally the relationships between degrees of dependency and degrees of differences between instructional and independent reading levels were explored.

Out of a total of 140 third graders from 10 Lutheran Schools in Northwestern Indiana and Northeastern Illinois, 119 children, 7 years, 8 months to 8 years, 11 months old, who had not been retained, were given the Otis-Lennon Mental Ability Test, Elementary I by the researcher. The 102 children, who met the IQ requirement of 88 to 127, were those from whom a random selection of 65 children, 60 Caucasians and 5 Negroes, was made. Measures for 56 children, 28 girls and 28 boys, whose mothers filled out the Independence Training Questionnaire provided the data.

The following instruments were researcher-administered in the sequence given through the fall and early winter of 1976-1977: reading achievement--Gates-MacGinitie Reading Test, Elementary I; Temple Informal Reading Inventory preceded by the Daniels' Word Recognition Lists; dependency--House-Tree-Person (H-T-P) drawings. Teachers completed Teacher Rating Scales for measures of school-setting dependency; mothers completed Independence Training Questionnaires for measures of restricting or granting of independence.

Pearson correlations and t-tests with an alpha criterion of .05 were utilized to test the hypotheses.

1. There will be significant negative relationships between high reading achievement as measured by the Gates-MacGinitie Reading Test scores and dependency scores indicating high dependency as measured by the following: a. the H-T-P scores b. the Teacher Rating Scale scores 2. There will be significant negative relationships between high reading achievement as measured by the levels on the Informal Reading Inventory for the instructional levels and dependency scores indicating high dependency as measured by the following: a. the H-T-P scores b. the Teacher Rating Scale scores 3. There will be no significant relationships between maternal antecedents of dependency as measured by the scores of the Independence Training Questionnaire and high reading achievement as measured by performance on: a. The Gates-MacGinitie Reading Test b. The Informal Reading Inventory 4. There will be no significant relationships between maternal antecedents of dependency as measured by the scores of the Independence Training Questionnaire and dependency as measured by the following: a. the H-T-P scores b. the Teacher Rating Scale scores 5. There will be significant relationships between degrees of dependency as measured by the scores of a. the H-T-P scores. b. the Teacher Rating Scale and the differences between the instructional and independent levels as measured by the Informal Reading Inventory. c. There will be no significant relationships between degrees of dependency as measured by the scores of the Independence Training Questionnaire and differences between instructional and independent levels as measured by the Informal Reading Inventory.

The results of testing the above hypotheses are as follows: 1. a. rejected b. confirmed 2. a. and b., rejected 3. a. rejected, Gates-MacGinitie Vocabulary grade score; confirmed, Gates-MacGinitie Comprehension grade score b. rejected 4. a. and b., cannot be rejected 5. a. and b., rejected c. cannot be rejected.

The Teacher Rating Scale seems most related to reading achievement in situations where teacher-pupil discussion does not follow oral and silent reading.

The H-T-P and the Independence Training Questionnaire appear to relate to reading achievement in more stressful situations.

The Independence Training Questionnaire may indicate maternal overprotection. Children given late independence training may have evidenced lower performance on the Informal Reading Inventory as a result of overprotection. Overprotection may inhibit acquisition of independent behavior which may be necessary in all reading development.

The H-T-P, the Teacher Rating Scale, and the Independence Training Questionnaire appear to measure different kinds of dependency.

Differences between independent and instructional levels is more a function of the stringency of their criteria than of dependency.

A STUDY OF THE RELATIONSHIP OF CERTAIN HOME ENVIRONMENTAL FACTORS TO HIGH OR LOW ACHIEVEMENT IN READING AMONG BLACK PRIMARY SCHOOL AGE PUPILS OF LOW SOCIOECONOMIC STATUS Order No. 7811945

BAUMER-MULLOY, Marjorie, Ph.D. University of Maryland, 1977. 152pp. Supervisor: Dr. Carol Seefeldt

Purpose. The purpose of this study was to investigate certain family background factors and interactive variables present in the home environment to determine their influence on high achievement in reading among black primary school age pupils of low socioeconomic levels. The home environment was identified by family background factors of father absence, number of siblings in the home, the child's ordinal position, and sex of the child. The interactive variables included: 1) Achievement Press; 2) Language Models; 3) Academic Guidance; 4) Activeness of the Family Members; 5) Intellectuality in the Home; and 6) Work Habits in the Home. These interactive variables were identified by Dave (Unpublished doctoral dissertation, 1963).

Hypotheses. The following hypotheses were tested: 1) There is a positive relationship between the score on a measure of reading achievement and the presence or absence of the father in the home. 2) There is a positive relationship between the score on a measure of reading achievement and the number of siblings present in the home. 3) There is a positive relationship between the score on a measure of reading achievement and the child's ordinal position in the family. 4) There is a positive relationship between the score on a measure of reading achievement and the sex of the child. 5) There is a positive relationship between scores on a measure of reading achievement and the measure of home interactive variables. 6) There is a positive relationship between the score on a measure of reading achievement and each item of the measure of home interactive variables. 7) There is a positive relationship between scores on a measure of reading achievement and a measure of home interactive variables by pupils in each grade: one, two, and three.

Procedures. A stratified random sample of 60 high achieving and 60 low achieving readers was selected for study from a population of 750 first through third grade students in a large urban school. Each of the families of the 120 students was assigned a socioeconomic status score based on an index of social status and only those who received a score within the classification of low income were included in the final sample. The parents were contacted and an interview arranged. The Dave Scale, a measure of the educational environment of the home, was utilized in each interview and each family was given a rating according to the Scale. Information on family background factors was obtained prior to the interview.

Conclusions. Hypotheses one, two and three were not supported: Father presence/absence, number of siblings present in the home and ordinal position of the child were not related to scores on a measure of reading achievement. Hypothesis four was supported. The sex of the child was related to reading achievement. Proportionately more boys were represented in the low achieving reading group. The fifth and sixth hypotheses were sustained. The two groups of readers were significantly different on all six subenvironments of the Dave Scale. The differences in mean scores on each of the six home interactive variables and 97% of the questions on the Dave Scale exceeded the .01 level of confidence. Hypothesis seven was partially supported. Analyses were made of the scores received on the six variables to grade effect, to reading performance of high and low scorers, and to interaction of grade with reading level. Only one of the six variables (Intellectuality in the Home) reached significance when compared with grade level. The reading performance effect was significant at all levels ($p < .001$) and the interaction effect between grade and reading level discriminated positively at the .05 level; although no interaction existed for the subenvironments separately.

THE INTERACTION OF A VISUAL FORM INTEGRATION TASK ON WORD RECOGNITION AND OTHER SELECTED VARIABLES Order No. 7816607

ELWINGER, Elyda Seely, Ed.D. East Texas State University, 1978. 167pp. Adviser: Della P. Jeter

Purpose of the Study: The study investigated the relationships among the variables of word recognition, mental age, intelligence quotient, and auditory sequential memory in a population of academically "high risk" individuals. At each age level between six years and adulthood, the population was separated by pass/fail performance on a visual form integration task.

Procedure: Standardized assessment instruments were administered to the population, and standard scores were derived. Scores were analyzed by computer. Point biserial correlation coefficients determined the relationship among the variables for the two groups at each age level. A two way analysis of variance was selected to determine the significant differences in the pass/fail populations at each age level.

Findings: Overall significant relationships were found among the pass and fail groups for the seven, eight, ten, and eleven year old groups. Particularly significant for these age groups were the variables of word recognition, mental age, intelligence quotient, and auditory sequential memory. The means of the individuals who failed a visual form integration task were significantly lower than those of the individuals who successfully completed a visual form integration task. No significant relationships were noted for the adolescent population. Not until adulthood did the findings between the two groups again become significant. The variable reflecting significance was word recognition, which again proved to be poorer in the group who failed a visual form integration task.

Conclusions: The task of correctly completing a visual form integration task is related to different variables at different age levels. The younger children in the study were influenced by maturation in the ability to copy forms as well as ability to integrate auditory and visual information, on both meaningful and non-meaningful levels. Until the age of twelve, many of the basic skills and abilities related to learning word recognition are still being integrated and refined by each individual. The findings of the present study reflect the difficulty of some individuals with the necessary integration at the younger levels. The lack of significant results in the adolescent years reflects the desire to remain anonymous and absorbed in the peer population without attracting attention to deficiencies which would draw them apart from their peers. The difficulty with both the visual form integration task and word recognition in the adult population reflects serious problems in the acquisition of basic skills. Requests for academic evaluations reflect an adult attitude toward recognition of a need and a search for assistance. The visual form integration task is a simple one, easy to administer, but sufficiently difficult to assist in evaluating visual integrative skills. The results of the present study suggest that further research in the use of the visual form integration task would be beneficial in determining the potential of the visual integration task as an aid in planning academic programs for the younger age populations and for the adults who failed to acquire needed skills in the early grades.

THE RELATIONSHIP BETWEEN READING GAIN AND SCHOOL BEHAVIOR AMONG FOURTH, FIFTH AND SIXTH GRADE DISABLED READERS Order No. 7813396

FUCHS, Douglas Henry, Ph.D. University of Minnesota, 1977. 182pp.

Many children who have reading problems also manifest disturbing behavior in their classrooms, a relationship which has been substantiated by much clinical and empirical evidence. The effects of various remedial programs on reading skill has been well established, but the bulk of the research has ignored the behavioral facet of the relationship. Specifically, there have been few attempts to find out if improving a child's ability to read also improves his behavior in the classroom. Instead, the effort in these studies has been to assess the child's performance in reading achievement only. Related, non-reading classroom behavior goes largely unexamined.

The first and primary objective of the present study was to investigate the amount and nature of changes in classroom behavior concomitant with change in reading performance among seriously disabled fourth, fifth and sixth grade children enrolled in a remedial reading program. Assuming that improvements in class conduct were observed together with gains in reading in the classroom in which reading remediation took place, a second purpose of the present study was to assess the extent of transfer of such changes in conduct from the remediation room to the regular classroom.

A control group was employed to assess the importance of improved reading skill as a causal factor in this presumed relationship. The behavior of children assigned to the experimental group was observed in both the room in which remedial activities occur and in the regular classroom. Observing in the regular classroom in addition to the remedial room seemed important since previous research found improvement in behavior to be specific to the situation in which academic improvement took place. In order to explore the possibility of transferring presumed improved behavior in the remedial setting to the regular classroom, teachers and parents of a randomly selected subgroup of experimental subjects received periodic, formal feedback on the children's progress in the remedial reading program.

Dependent variables employed to assess the effect of the experimental treatments on reading achievement and school conduct were: the Gates-MacGinitie Reading Test, Form C; the Words in Isolation subtest of the Silent Reading Diagnostic Tests; an Informal Reading Inventory; and a modified version of Deno's observation and recording system. T-tests, three-way analysis of variance, and two-way analysis of variance were the statistical methods used to evaluate the effects of the experimental reading program and formal feedback.

Both the experimental and control groups showed a statistically significant and important improvement in reading from pre- to post-treatment testing. Experimentals showed higher mean raw scores than the controls on the three reading measures employed, but none of these differences in raw scores were found to be statistically significant. Experimentals manifested statistically significant and dramatic reductions in frequency of disturbing behavior in the remedial reading room. A comparison of the treatment groups' raw score frequencies revealed that the experimentals behaved somewhat more appropriately than controls in the regular classroom, although this

difference was not statistically significant. A subgroup of experimental subjects on whom formal feedback was provided demonstrated significantly less "noise" -- one of the four categories of disturbing behavior comprising the observational system employed in the present study -- than experimentals for whom no feedback was given. Generally, however, formal feedback did not seem to aid the transfer of important, positive behavior change in the remedial setting to the regular classrooms.

PERFORMANCE OF HIGH, MODERATE AND LOW READING SUBJECTS ON A READ AND RECORD TASK
Order No. 7814944

GREY, Lyndell Elizabeth, Ed.D. University of Georgia, 1978. 131pp. Supervisor: George E. Mason

The purpose of this study was to examine the relationship of subject performance on a reading achievement test (Nelson-Denny) and the r/r task (an informal read and record task that categorized handwritten responses on the basis of evidence of superior reading and negative affective aspects).

The procedure included initial testing of 125 university freshmen with the comprehension portion of The Nelson-Denny Reading Test. This was followed by an administration of the r/r task requiring individual reading of a selected paragraph and the recording of any thoughts or responses to that paragraph. The data collection concluded with a brief quiz for comparing Nelson-Denny comprehension scores with scores on a quiz based on the r/r paragraph.

The significant results include evidence of all three r/r task mastery levels (integrative abstract, cognitive-complex, and cognitive-simple) occurring among the protocols in the three Nelson-Denny reader groups (high, moderate, and low).

Low Nelson-Denny reader group subjects demonstrated more than the expected evidences of integrative abstract and cognitive-complex responses. When all protocols were examined for evidence of negative aspects of comprehension, the protocols labeled integrative abstract showed no evidence of interfering emotional responses.

PREDICTORS OF READING ACHIEVEMENT FOR STUDENTS ENROLLED AT A TWO-YEAR REGIONAL CAMPUS OF A STATE UNIVERSITY
Order No. 7816508

HODGES, Betty Hovis, Ph.D. University of South Carolina, 1978. 180pp.

Students (64) at a two-year campus of a large university were enrolled in an "Effective Reading" course for one semester. Sample included two general types of students, one advised into the course because of low SAT scores, rank in high school class, or recent admission after a lapse in school attendance, and the other fulfilling an academic requirement from the General Studies division.

The purpose of the study was to delineate which student factors, singly and in combination, are predictors of student reading achievement on Rate and Retention, Skimming and Scanning, and Paragraph Comprehension. The following student factors were considered: sex, educational aspiration, hours working per week, race, study habits, cigarette smoking, family size, extracurricular activities, educational attainment of parents, marital status, financial aid, age, SAT scores, rank in high school class, cognitive style category, hours watching television, and family reading habits.

The procedures used included stepwise multiple regression in order to rank the factors, singly and in combination, according to their contribution to the variation in reading achievement scores. Discriminant analysis was selected to look at cognitive style category and its relationship to reading achievement.

The instruments used to measure students' reading achievement were Forms A and B, McGraw-Hill Basic Skills System Reading Test (MHBSS); students' study skills, Survey of Study Habits and Attitudes (SSHA), Form C; students' cognitive style category, David Kolb's Learning Style Inventory. Selected student data were gathered through a questionnaire administered to students. Data on financial aid, SAT scores, rank in high school class were gathered from other college offices.

Study findings indicate that the single factors which contribute to reading achievement on Rate and Retention are (1) Marital Status, (2) Pre-test scores on Rate 1, and (3) Educational Aspiration; on Skimming and Scanning, (1) Pre-test scores on Skim 1; on Paragraph Comprehension, (1) Pre-test scores on Rate 1, Skim 1, Comp 1; (2) Race, (3) Work Methods, (4) Study Habits Total, (5) Educational Level of parents, (6) SATV, SATM scores, (7) Cognitive Style Category.

The multiple factors which best contribute to reading achievement on Rate and Retention are (1) Pre-test scores on Rate 1, (2) Educational Aspiration, (3) SAT scores, (4) Educational Level of the father; on Skimming and Scanning, (1) Pre-test scores on Skim 1, (2) Rank in High School Class, (3) Work Methods, (4) Cigarette Smoking; on Paragraph Comprehension, (1) Pre-test scores on Comp 1, (2) SATV, (3) Educational Level of the mother, (4) Hours Watching Television.

Cognitive style analysis indicates that cognitive style is related to the variation in gain scores in Paragraph Comprehension. The cognitive style categories, Converger and Assimilator, were found to have significant mean differences.

Study indicates that student factors modifiable in a college setting, Pre-test scores, study habits (work methods), educational aspiration, and cognitive style category, are valuable sources of information to reading teachers and coordinators, general curriculum planners, and guidance counselors in advising, curriculum planning, and in modifying of existing reading programs.

AN INVESTIGATION OF THE DEVELOPMENT OF PHONOLOGICAL CODING IN CHILDREN AND ITS RELATIONSHIP TO READING ACHIEVEMENT
Order No. 7814582

JAMES, Mary Lee, Ph.D. Saint Louis University, 1978. 133pp.

The importance of speech and language in reading processes has been the object of many research efforts. Edfeldt (1960) reported that covert speech is nearly universal during silent reading. Conrad (1971) demonstrated a developmental pattern in phonological short-term memory coding and suggested that perhaps phonological coding (as opposed to pictorial, visual, or shape coding) is a necessary component for reading readiness and reading achievement.

To test Conrad's hypothesis a sample of 108 children was randomly selected from an upper-middle class suburban school district. Twenty-seven children were selected at kindergarten grades one, two, and three. These children were individually administered a short-term memory task involving memory for like and unlike sounding words. The difference between memory for unlike (nonhomophones) and like sounding words (homophones) was the measure of the development of phonological coding. Group tests of mental ability were also administered.

The developmental nature of phonological coding was analyzed by means of a four-way analysis of variance with repeated measures. The phonological coding scores (from the memory task) were related to reading achievement by means of multiple regression analyses. IQ, mental age, and scores on the Metropolitan Readiness Tests were also used as independent variables.

The data generally confirmed Conrad's finding indicating growth of phonological coding skills from kindergarten to grade three with greatest growth occurring between kindergarten and grade two. The growth pattern followed a linear trend. These data indicated that children in grade three used more verbal labels and rehearsal strategies than did younger children.

The data concerning the relationship of phonological coding and reading achievement were inconsistent. The data from third grade students strongly supported the notion that the two variables are significantly correlated. However, at the other grade levels the results were equivocal. At each level IQ or mental age was the best single predictor of reading achievement. But at grade three phonological coding was significantly correlated to reading achievement when IQ was held constant.

The Metropolitan Readiness Tests had a higher correlation to reading achievement than did the phonological scores; however, it was highly correlated to IQ whereas the phonological coding scores were not significantly correlated to IQ indicating a great deal of overlapping between the Metropolitan Readiness Tests and IQ, but relatively less overlapping between IQ and phonological coding.

The instrument developed in this study shows promise as a tool for the analysis of reading readiness and the study of the components of the reading process. Further testing is indicated using other populations in order to fully evaluate the practicality and validity of the instrument and the relative importance of the construct of phonological coding.

THE RELATIONSHIPS BETWEEN COGNITIVE DEVELOPMENT, LANGUAGE DEVELOPMENT, AND READING ABILITY IN CHILDREN AGES SIX-TO-NINE

Order No. 7814838

JENKINS, Lee L., Ph.D. Claremont Graduate School, 1978. 180pp.

This investigation was concerned with examining certain relationships that exist between cognitive development, language development and reading ability in children ages six-to-nine. Piaget's cognitive developmental model including theories on language and thought were used as a basis for the study.

Forty-six children in Marysville, California were categorized into three cognitive levels on the basis of their responses to five Piagetian tasks--conservation of number, matter, area, volume and displacement. Thirteen children did not answer any of the questions logically and were classified non-conservers. Twelve children conserved on four or five of the tasks and were classified as conservers. The remaining twenty-one were classified as transitional. An analysis of variance was performed to see if the mean ages of the three cognitive groups differed at the 0.01 level. The age differences were not significant.

Each of the forty-six children was given an individual test consisting of language development and reading items. The language subtests indicated the children's knowledge of conjunctions of causality, noun plurals and sentences which did not follow normal syntactical patterns. The four reading tests were (1) 100 words of straight prose, (2) 100 words of prose with the vowels missing from each fifth word, (3) 100 words of prose with all vowels missing and (4) 250 words of prose with each fifth word missing (cloze test). The children read each selection with the investigator noting the number of errors.

Analysis of variance was used to determine if the mean scores on the language tests differed between the three cognitive groups at the 0.01 level of confidence. The results showed significant differences at the 0.01 level for the total language development score and two of the three sub-tests--conjunctions and noun plurals. The Newman-Keuls Pairwise comparison test was performed to determine exactly between which groups the significance occurred. The most significant differences were found between the conservers and non-conservers. The next highest number of significant differences was between transitional conservers and non-conservers. The least amount of significant differences was between transitional conservers and conservers. This was true for all analyses of this research. There were no children in this study who were classified as non-conserver with a high language development score and no children classified as conserver with a low language score.

The correlation between the language development score and reading scores were significant at 0.001 level of confidence (r=0.61 prose, r=0.71 cloze comprehension). The exceptions were children with a low language score and few reading errors. No children had a high language score with high reading errors. The children with a low language score and few reading errors on the prose test did less well on the cloze comprehension test.

Analysis of variance was performed to determine if the mean differences between the three cognitive groups were significant at the 0.01 level of confidence; on the 100 word prose test the mean for non-conservers was 46 errors, the transitional conservers was 11 errors, and conservers was 0.3. These differences were significant between the three groups. The exceptions to this high correlation between cognitive development and reading were non-conservers with few reading errors. There were no conservers with high reading errors. The non-conservers with few reading errors on the prose reading test did less well than their conserving peers on the cloze comprehension reading test.

Four single correlations were performed:

n = 46	Language development vs. prose reading	r = 0.61
n = 46	Cognitive development vs. prose reading	r = 0.64
n = 21	Language development vs. cloze reading	r = 0.71
n = 21	Cognitive development vs. cloze reading	r = 0.68

All four correlations were significant at 0.001 level of confidence. A multiple regression analysis was performed with two sets of data. The multiple correlation of language development added to cognitive development vs. prose reading was 0.69. The multiple correlation of language development added to cognitive development vs. cloze reading was 0.78. Both multiple correlations added significance to the single correlations at the 0.05 level of confidence.

This study indicates that children who do not think logically on Piagetian conservation tasks have less developed language than their conserving peers. The children who do not think logically on the Piagetian conservation tasks have considerably more difficulty reading print than their conserving peers. Also, the children who score less well on the three language development tests have more difficulty reading print than the children who score higher on the language tests. This study has implications for educators designing reading curriculum and researchers studying psycholinguistic foundations of reading.

SHORT-TERM MEMORY, ASSOCIATIVE LEARNING AND READING ACHIEVEMENT OF TWO GROUPS OF COLLEGE FRESHMEN

Order No. 7810273

JOHNSON, Jane Lewis, Ed.D. Ball State University, 1977. 116pp. Chairperson: Dr. Mary Harshbarger

The purpose of this study was to compare the performance, on measures of (1) short-term memory, (2) associative learning, and (3) reading achievement of College Freshmen in two selected groups: (a) regular admission students (b) Academic Opportunity students enrolled in a college reading improvement course.

A total of eighty college freshmen were selected for the study. An equal number of regular admission and Academic Opportunity students were selected from volunteers enrolled in GXPSY 100 (General Psychology) and class lists of individuals enrolled in ID 105 (Reading Development and Special Problems) at Ball State University, Muncie, Indiana. Students selected to participate in the study met the following criteria: 1. Second Term college freshmen at Ball State University, Winter Term, 1974 2. Third Term college freshmen at Ball State University, Spring Term, 1975 3. Chronological age from 18-0 to 20-11 years 4. IQ no less than 83 5. Apparent visual and auditory acuity within the normal range 6. Enrollment in either ID 105 (Reading Development and Special Problems) or GXPSY 100 (General Psychology) the term of participation in the study.

The Diagnostic Reading Test, Survey Section; Upper Level, Form C was selected and administered to all subjects as a measure of reading achievement.

The following tests were selected as measures of short-term memory: 1. The Detroit Tests of Learning Aptitude Test 9, Visual Attention Span for Unrelated Objects Test 16, Visual Attention for Letters Test 6, Auditory Attention Span for Unrelated Words Test 13, Auditory Attention Span for Related Syllables Test 18, Oral Directions. 2. Stanford-Binet Intelligence Scale, Form L-M, 1960 Digits (Forward) Digits (Reversed).

The Gates Associative Learning Tests and the Detroit Test of Learning Aptitude, Subtest 4, Verbal Opposites, were chosen as measures of associative learning ability.

Analyses of data were carried out by two-way analyses of variance and two-way analyses of covariance. General intelligence and Scholastic Aptitude Test scores were selected as appropriate covariates. Sex differences were controlled by statistically equating male and female subjects in the two groups.

The findings of this study show that the test scores of regular admission students and Academic Opportunity students, enrolled in a college reading improvement program, do differ significantly in reading achievement and general intelligence. When intelligence was statistically controlled in testing the additional hypotheses, the two groups were found to not differ significantly in short-term memory or associative learning.

Conclusions. The findings suggest: (1) Of the auditory memory factors included in the study, auditory recognition memory for linguistic-meaningful stimuli appears to be the best single predictor of reading success. (2) As memory development stabilizes and reading skills become proficient the relationship between the two diminishes. (3) Auditory memory abilities are developmental in nature and increase with chronological age as represented by grade level placement. (4) With those children experiencing failure in initial reading the evaluation of auditory recognition memory appears prudent. (5) The assessment of all three memory factors does not produce significantly more information relative to the development of reading skills than the recognition memory test alone.

Recommendations. (1) Reading readiness instruments should include auditory recognition memory items in the form of a "Shepard-Teghtsoonian Task" in preference to sequential or content memory items. (2) Educators should recognize that a delay in auditory recognition memory development is a possible factor related to a lag in reading ability when all other variables appear satisfactory. (3) An ameliorative program for training auditory memory abilities is recommended for those children who appear deficient. (4) Training techniques for auditory memory development should be tested experimentally using the auditory memory test battery to compare pre- and postscores in the control and experimental groups.

(Copies available from Micrographics Department, Doheny Library, USC, Los Angeles, CA 90007.)

AUDITORY MEMORY AND READING ACHIEVEMENT

KING, Louis McLean, III, Ed.D. University of Southern California, 1978. Chairman: Professor Charles M. Brown

Problem. The purpose of the study was to determine the relationship between selected auditory short-term memory factors and reading achievement in a middle and upper-middle class, second, fourth, and sixth grade population. The study provided empirical evidence relative to the appropriateness or inappropriateness of these measures as predictors of reading competence in the target population, and diagnostic implication regarding the role of auditory short-term memory processing in the reading process.

Procedures. One hundred-thirty second, fourth, and sixth grade students enrolled in the Capistrano Unified School District, Orange County, California, participated as subjects in the causal-comparative study of recognition memory, content memory, sequential memory, sex, chronological age, and reading achievement. Subjects were randomly selected from the respective grade levels. Sixty-nine females and sixty-one males were included in the sample group. The Goldman-Fristoe-Woodcock Auditory Memory Tests and the Comprehensive Tests of Basic Skills were administered to all subjects by the research team. Scores obtained on each of the measures were used to examine the predictive usefulness of the auditory memory instrument as an indicator of reading achievement. Data were subjected to the statistical procedures of the Pearson product moment correlation, analysis of variance, and stepwise multiple regression analysis.

Findings. (1) There was a significant relationship between auditory recognition memory and reading achievement at the second and fourth grade levels, but not at the sixth. (2) There was a significant relationship between auditory memory for content at the second grade level only. (3) There was no significant relationship between auditory sequential memory and reading achievement. (4) There was a significant relationship between the combined auditory memory scores and reading achievement at the second grade level only. (5) There was a significant relationship between each of the auditory memory tests and grade level placement of subject. (6) There was no significant relationship between sex and auditory memory ability. (7) There was no significant relationship between sex and reading achievement. (8) There was a significant multiple correlation between reading and recognition memory, content memory, sequential memory, and sex in second grade subjects only. (9) There was no significant relationship between chronological age and reading achievement.

PREDICTING FOURTH GRADE READING ACHIEVEMENT USING VARIABLES AVAILABLE IN SCHOOL RECORDS

Order No. 7813891

LANGER, James William, Ph.D. The University of Akron, 1978. 321pp. Director: Dr. Robert Ferguson

Classroom teachers and reading specialists have become increasingly concerned with the concept of predicting reading achievement and its potential for early instructional intervention. Although previous studies indicated the possibility of such prediction, they were limited by three factors: (a) the use of only one or a few variables; (b) the need to administer technical or new instruments to obtain data; and (c) the report of findings in sophisticated statistical terminology. In spite of such research, reading disability levels have not been reduced and examples of application of predictive instruments of classroom teachers were rarely available in the literature.

The purpose of this study was to identify data in school records which were available in terms of predicting reading achievement in order that teachers, administrators, and reading specialists could design intervention programs for all ranges of students in need.

In this study data were gathered on a fourth grade population from the Berea City School District, Berea, Ohio. Fifty-three independent, predictive variables were used, including: father's occupation, sex, school entrance age, standardized test scores, IQ test scores, attendance records, speech-hearing data, and teacher assessments. The criterion was the raw score of the Reading Sub-Test of the grade four Ohio Survey Test.

An ex post facto research design with alternative hypotheses was implemented. Multiple linear regression was the statistical procedure utilized. Two regression analyses were conducted, the first using all 53 predictive variables and the second using the 18 most predictive variables from the first analysis. Data was both collected and reviewed for its predictive value at seven decision-making points, ranging from pre-kindergarten to the end of grade three.

Results showed that data available in school files can be used to predict reading achievement. It also indicated that such prediction-potential can be identified as early as the end of kindergarten and significantly increased as variables were added at each subsequent decision-making point. Reading test scores, the IQ score, and teachers' assessments were the most predictive variables.

Two other results of the study related to application of the findings. First, a Teacher Prediction Scale--a form for

recording all predictive data from kindergarten through grade three-was designed for use by the classroom teachers. Second, the process of identifying variables currently available, casting them into regression models, and designing predictive equations was delineated in order that other school systems could replicate the study.

It was recommended that further research conduct longitudinal studies using predictive equations and the Teacher Prediction Scale; validate the predictive value of teachers' assessments; apply the regression process of this study to varied data in the records of other systems; and examine the types and value of varied intervention programs.

The results of this study implied that reading needs of students can be identified early, using a variety of predictive variables, and that simple and efficient instruments can be designed to aid the classroom teacher in this identification in order to re-design both curriculum and instruction.

A COMPARISON OF FIRST GRADE READERS AND NON-READERS ON THE USE OF LINGUISTIC CUES FOR IDENTIFYING WORDS

Order No. 7813991

LOCHHAAS, Clifford V., Ed.D. State University of New York at Buffalo, 1977. 210pp.

One hundred four first grade pupils were assessed on the use of linguistic cues in identifying common words of the primary level vocabulary. They were divided into two subgroups, one categorized as Readers and the other Non-readers. The two categories were distinct populations due to the marked difference in reading ability which served as the criterion for assignment to a category.

The instrument by which the groups were assessed was developed specifically for this study. Each of the seven tests contained a list of thirty primary words. Words for the tests were matched in word length, spelling pattern and frequency of occurrence in primary oral and written vocabularies. The tests were designed to maximize dependence upon a single or a combination of two or three linguistic cues for identifying the words. The three cues for word identification around which the instrument was designed are: syntactic (the grammatical and morphological constraints of the context), semantic (the constraints of the larger environment of the word which indicate meaning), and grapho-phonologic (the overall spelling to sound correspondence within the word).

The questions which served as a basis for this study are concerned with differences in ability within as well as between the two populations when the number of linguistic cues provided for identification of the word is varied. Readers were expected to identify more words when provided multiple cues than when they were provided only one cue. Non-readers were expected to demonstrate little or no difference in word identification ability when additional cues were provided.

The assessment instrument proved to be reliable, particularly in discriminating between populations on the basis of composite single and multiple cue scores. The tests differ in difficulty, but proved to be similar in rank order for both populations despite the fact that they were easier for Readers than for Non-readers. They appear to be tapping a broader underlying skill for Readers while assessing several discrete abilities for Non-readers.

Readers and Non-readers were different in their ability to use linguistic cues for word identification. Non-readers did not improve in word identification ability when multiple cues were provided, but Readers demonstrated a significantly higher score on multiple cue tests over the single cue. In addition, Readers scored significantly higher than Non-readers on all tests with the exception of the single cue Sem (semantic) test.

THE RELATIONSHIP OF SELF-PERCEPTIONS OF READING ABILITIES TO READING ACHIEVEMENT, ATTITUDES TOWARD READING, AND COGNITIVE STYLES

McGRAW, Jane Sachie Okinishi, Ed.D. University of Southern California, 1978. Chairman: Professor Charles Brown

Purpose. The major purpose of this study was to determine the extent of the relationship between self-perceptions of reading abilities and each of several measures reflecting the constructs of attitudes towards reading, achievement in reading, and two cognitive styles — field independence-dependence and internal-external locus of control. Two additional purposes were to ascertain the interrelationships among the measures of the dependent variables; and to identify differences in the relationships of the reading constructs for high-achieving and low-achieving pupils, by grade level subgroups and by subgroups of boys and girls.

Procedure. Two randomly selected samples of 47 fifth- and 47 seventh-grade pupils were administered measures chosen to represent the constructs of self-perceptions of reading abilities, attitudes toward reading, reading achievement, and the two cognitive styles — field independence-dependence and internal-external locus of control. Pearson product-moment correlations and the z test of differences between correlation coefficients were applied to test the hypotheses for the sample of 94 pupils, at each grade level, and by sex subgroups. With alpha set at the .05 level of significance, one- and two-tailed tests of significance were employed.

Selected findings. (1) Self-perceptions of reading abilities are significantly related to reading achievement, attitudes toward reading, and the two cognitive styles of field independence-dependence and internal-external locus of control. (2) In eight correlation analyses yielding 28 coefficients among the measures, 18, 13, and 21 coefficients were statistically significant for the total sample, Grade 5 group, and Grade 7 group, respectively. (3) Relative to differences in the relationships of the reading constructs for the subgroups, a significant difference was found to exist between the sexes on the relationship between reading achievement and attitudes toward reading. Girls, as compared to boys, had more positive attitudes toward reading.

Selected conclusions. (1) Affective, attitudinal, and personality factors do have both a direct and indirect influence on achievement in reading. (2) High-achieving and low-achieving elementary pupils are equally cognizant of their reading abilities. (3) The reading constructs appeared to be interrelated but the constructs of field independence-dependence and internal-external locus of control appeared to be relatively independent of one another. (4) Irrespective of grade levels, girls as compared to boys exhibited higher competence in self-perceptions of reading abilities and more favorable attitudes toward reading.

Selected recommendations. (1) Replication of this investigation incorporating larger samples, additional differentiation by achievement levels and/or cognitive styles, alternative self-report measures, the inclusion of interest as a variable and other grade levels is urged. (2) In addition to the current practice of academic record-keeping, the inclusion of affective and cognitive style profiles is strongly recommended. By describing cognitive styles in terms of a profile, information relative to how an individual learns could ensure how each individual learner should be taught in the teaching/learning situations. (3) The findings of this study should encourage educators to have confidence that children can report their perceptions with some degree of competence. Greater reliance on pupil self-perceptions of academic performance measures is advocated. (4) Further research is needed among attitudes toward reading, reading interests, achievement in reading, achievement motivation and their relationships to all of the variables investigated. Experimental research on cognitive styles between high- and low-achievers could provide evidence for improved academic achievement and for the development of more effective instructional methods.

(Copies available from Micrographics Department, Doheny Library, USC, Los Angeles, CA 90007.)

A STUDY OF FINGER AGNOSIA IN LEARNING DISABLED CHILDREN

Order No. 7814604

MALONE, J. Michael, Ph.D. Saint Louis University, 1978. 91pp.

The primary purpose of this study was to determine whether a group of defined learning disabled children who failed the Kinsbourne and Warrington (1963a) test of finger agnosia would differ in their performance on the Wechsler Intelligence Scale for Children (Wechsler, 1949) WISC from the performances of a group of learning disabled children who passed the test of finger agnosia when both groups were drawn from matched chronological age and full scale I.Q. ranges. The secondary question of the study was to test Denckla's (1972) clinical observation that children who displayed finger agnosia demonstrate significantly superior oral spelling ability over their written spelling ability.

The children in this study were drawn from a population of defined learning disabled children in "outstate" Missouri schools who fell within a chronological age range of eight years, zero months, to twelve years, zero months, and within a fixed I.Q. range of 85–115 on the WISC. Thirty-five of these children who failed the Kinsbourne and Warrington (1963a) test of finger agnosia were designated as the experimental group and thirty-five children who passed the test comprised the control group.

The subtests of the WISC were grouped according to the factors which emerged from Cohen's (1959) factor analysis of that test. The four factors tested were Comprehension I and II, Freedom from Distraction, Perceptual Organization, and Quasi-specific. Verbal and Performance Scale I.Q. scores as normally derived on the test were also studied.

Hotelling's T^2 multivariate analysis of two independent samples was used to test the mean vector scores of the experimental and control groups. Where differences were found, the Roy-Bose simultaneous confidence intervals were utilized to determine which of the subtest means were significant within the T^2 value (Morrison, 1942). The t-test for related and unrelated measures was employed to test the remaining hypotheses within the primary question. The hypotheses tested indicated that verbal intellectual skills, as measured by the Verbal Scale I.Q. scores and the scores of the Comprehension I and II factor, were significantly higher in the learning disabled group who failed the finger agnosia test. Conversely, the research indicated that non-verbal, perceptual abilities as measured by the Performance Scale I.A. scores and the scores of the Perceptual Organizational and the Quasi-specific factors, were superior in the learning disabled children who passed the finger agnosia test. No significant differences were found between the groups on the Freedom from Distraction factor.

The secondary hypothesis regarding the specific nature of the spelling skills of children who demonstrate finger agnosia employed the Wilcoxon matched pairs, signed ranks test for small samples. The hypothesis tested indicated that the finger agnosia group had superior oral spelling ability over their written spelling ability.

This research produced the following implications for further research:

1. Further testing that includes a wide array of language and perceptual tests needs to be undertaken in order to better establish the extent to which these skills exist in children who exhibit finger agnosia.

2. A longitudinal study is needed to determine if finger agnosia results from an over-all maturational lag in the majority of learning disabled children, or whether the condition is static throughout development.

3. The written arithmetic skills of learning disabled children who exhibit finger agnosia needs to be investigated.

4. Research is needed to determine if learning disabled children who exhibit finger agnosia make more letter-order errors in their reading and spelling than children who have no symptoms of finger agnosia.

5. A comprehensive project needs to be undertaken in order to determine if the Gerstmann syndrome with its classic symptoms occurs as a diagnostic entity in children with developmental disabilities.

CHARACTERISTICS OF KINDERGARTEN CHILDREN'S PRODUCTIVE CONTROL OF ENGLISH LANGUAGE STRUCTURES IN COMPREHENSION AND PRODUCTION OF SENTENCES IN RELATION TO READING READINESS ABILITY

Order No. 7808066

MASLOW, Clara Rosenberg, Ed.D. Boston University School of Education, 1978. 212pp. Adviser: Thomas E. Culliton, Jr.

Purpose

The purpose of this study was to test the relative effect of two different kinds of English language structures, namely, semantic structures and syntactic structures, on the developmental states of Kindergarten children's ability to process verbal information, in relation to their reading readiness ability. Hypotheses were examined for the influence of children's readiness ability on the development of oral language processing strategies and verbal maturity, on comprehension and production of sentences. An implicit notion is that children's control over syntactic and semantic structures would be reflected in their ability to process sentences, to effectively discriminate among children with respect to their readiness ability.

Procedure

Forty Kindergarten children were divided into two groups (high and low) on the basis of the overall Metropolitan Readiness Test scores, resulting in 20 subjects in each group. Each child was asked to reproduce (production) and to act-out (comprehension) a set of 24 stimulus sentences. There were six basic types of agent-action-object sentences, with four surface variations of each type. Pearson Product Moment Correlation Coefficients were obtained for correspondence between the mean scores of oral language tests, in comprehension and production, and the mean raw scores of the Metropolitan Readiness Test. Using analysis of variance for each of three summary scores, results were obtained for (two) readiness groups, (two) language modes and (six) sentence types.

Using children's ability to judge accurately the content of sentences with varying semantic and syntactic structures, the findings of both comprehension and production tests were significantly related to readiness ability on scores of the Metropolitan Readiness Test. Overall high correlation coefficients indicate a significant effect for language tests with all subtests of the readiness test ($p < .001$).

These results support the characterizations of children's control of semantic and syntactic structures of language in processing verbal information as significantly related to their reading readiness ability. The increasing within group variability in children with low-readiness ability underscores the effectiveness of using sentences with difficult language structures to discriminate among children ages 5.6 to 6.6 with low-readiness and high-readiness ability.

COMMUNICATION PROCESSES IN FAMILIES WITH DISABLED READERS

NEEDELS, Paul James, Ed.D. University of Southern California, 1978. Chairman: Professor Myron Dembo

Problem. The problem was to determine whether children with reading disabilities (RD) not related to intellectual, organic, sensory, or socio-cultural deficits come from families in which parent-child interaction is characterized by higher proportions of symmetrical and/or complementary relationships than is the case with normal readers. Symmetrical relationships are those in which identical behaviors are exchanged such as when a move toward dominance by one person is countered with a similar move toward dominance by a second person.

Symmetrical relationships, if excessively used, lead to competitive, unstable, and even chaotic interactions similar to the expelling or centrifugal patterns which have been found to be characteristic of symptom producing family systems. Complementary relationships, by contrast, are those in which opposite behaviors are exchanged such as when a move toward dominance by one person is met with submission by a second. Complementary relationships, if excessively used, result in stable, but extremely rigid and unchanging interactions similar to the binding or centripetal patterns also found to characterize symptomatic families. It was anticipated that RD families would exhibit a disproportionate use of complementary transactions thereby supporting the premise of a rigid, growth, restrictive parent-child structure.

Procedure. The subjects were 24 father-mother-son triads, 12 with RD boys and 12 with boys who were normal readers. The boys ranged in age from nine to thirteen years, were Caucasian, and came from intact middle and working class families. Experimental and control groups were equated on the basis of IQ, socio-economic status, and visual-motor functioning. Experimental subjects differed from controls only in reading level, achieving a standard scored of 89.0 on the reading section of the Wide Range Achievement Test as compared to the control group's standard score of 113.7. Families were audiotape recorded while discussing a series of items chosen from a family opinion questionnaire. A pilot study of two RD families had previously shown this task to be preferable to two alternate tasks with respect to degree of controversy and interpersonal interaction elicited. Discussion tapes were rated blindly and in random order by two raters using the Ericson-Rogers system for coding interpersonal transactions as to symmetry and complementarity. $\bar{Z}$ tests of significant differences between uncorrelated proportions were made of four hypotheses. Tests were two-tailed and alpha level was set at .15.

Findings. None of the hypotheses were supported at the stated level of significance. RD and normal reader families were not found to differ in the proportion of (1) "one-down" messages used by RD boys, (2) symmetrical and complementary transactions in parent-son exchanges, (3) parent-to-child support-seeking questions, and (4) total parent-to-child transactions.

Conclusions. Overall, parents and their children in both RD and normal families appear to engage in approximately equal proportions of complementary and symmetrical exchanges. This observation suggests that these interactional patterns may not be particularly relevant to a child's reading disability.

Recommendations. (1) An open system model taking into account developmental, contextual, and transactional features of the child's learning environment is proposed and recommended as a remedial and research tool. (2) The manner in which parents, and especially fathers, model, cue, and reinforce their son's auditory attending, critical thinking, and verbal expressive behaviors should be examined as possibly vital mediating processes between family relationships and RD. (3) The observed tendency for father-son interaction to be less frequent than mother-son interaction in RD families suggests the need for more attention to the quality of the father-son relationship.

(Copies available from Micrographics Department, Doheny Library, USC, Los Angeles, CA 90007.)

A STUDY OF THE RELATIONSHIP BETWEEN HAPTIC AND RELATED PERCEPTUAL FUNCTIONING AND READING ACHIEVEMENT OF SECOND GRADERS Order No. 7812233

PETTI, Linda Ann, Ph.D. Temple University, 1978. 109pp.

The present investigation dealt with the assessment of the haptic and related perceptual functioning of sixty high-achieving and low-achieving second grade readers, utilizing a revised form of the Modality Assessment Profile (MAP) (Reisboard, 1972) and the Bender Visual Motor Gestalt Test (Bender, 1938). It was hypothesized that the reading achievement of children who perform poorly on haptic and related perceptual tasks would be significantly lower than the reading achievement of children who perform well on haptic and related perceptual tasks.

On the Haptic Discrimination Test, Homogeneous Items of the MAP, high-achieving readers functioned significantly better than low-achieving readers on a task which required them to haptically discriminate among three homogeneously shaped geometric forms which were systematically varied in size. Thus, each stimulus triad consisted of small, medium, and large size versions of a geometric shape. Subjects were asked to select the largest shape of the three. Response errors consisted primarily of subjects choosing the medium size stimulus form instead of the largest one.

The results of the subjects' performance on the Haptic Discrimination Test, Heterogeneous Items of the MAP, indicated that high-achieving readers on this measure, which consisted of a task which required them to haptically discriminate among three heterogeneously shaped geometric forms which were systematically varied in size. Again, each stimulus triad consisted of small, medium, and large size stimuli and subjects were asked to select the largest shape of the three. The task of discriminating among heterogeneous items appeared to be an easier discriminatory task than that required in discriminating among homogeneous items.

An analysis of the results of the Haptic-Visual Letter Matching Test revealed that, as a group, high-achieving readers functioned significantly better than low-achieving readers on a task which required them to haptically discriminate among three letter shapes which consisted of a letter standard and two perspective transformations. The test results indicated that this test was a good discriminator between high-achieving and low-achieving readers as there was a significant difference in the means scores of the two groups on this measure.

Test data concerning the Haptic-Visual Auditory Association Test, in which high-achieving readers and low-achieving readers were required to form associations between haptic, visual, and auditory stimuli, indicated that high-achieving readers functioned significantly better on such associative learning tasks than did low-achieving readers.

The results of the subjects' performance on the Haptic-Spatial Test indicate no significant difference on the functioning of high-achieving and low-achieving readers on the Haptic-Spatial Test, which consisted of a test of spatial relations.

On the Haptic-Motor Test, in which subjects were required to haptically explore and copy, on paper, three-dimensional versions of the nine Wertheimer designs which comprise the Bender Visual-Motor Gestalt Test, high-achieving readers did not perform significantly differently than low-achieving readers in terms of total test performance.

A comparison of the performance of the readers on the Bender Visual-Motor Gestalt Test revealed that high-achieving readers functioned significantly better on this measure than did low-achieving readers.

Thus, the results of the present investigation imply that, for populations which are similar in nature to the one presently selected, high-achieving and low-achieving second grade readers differ significantly in their ability to function on haptic and related perceptual tasks.

LINGUISTIC COMPETENCE OF LEARNING DISABLED CHILDREN: AN INVESTIGATION USING THE CLOZE PROCEDURE Order No. 7814488

ROORDA, Timothy Lee, Ph.D. University of Washington, 1977. 104pp. Chairperson: Dr. James Q. Affleck

Although the term "learning disabled" has been used to apply to a wide variety of conditions which affect the learning process, the one characteristic which appears most often in definitions is the existence of poor academic performance. Many researchers believe that a language deficit is the most significant characteristic of a learning disability, as well as being a major factor in academic deficits.

In order to establish the ability of individuals to utilize the redundancy of the English language, and to study their linguistic competence, the cloze procedure has been used with many different types of subjects. In this study the cloze procedure was used with two groups of handicapped children; the learning disabled and behavior disordered, as well as a reading handicapped group consisting of students in the regular classroom, who are having reading problems. Every fifth word was deleted from a basal reader passage which was at the third grade level of reading difficulty. Every subject was asked to fill in the missing words. The passage was scored by counting the number of responses which were the same as the original text, and also those responses which performed the same grammatical function as the original word.

The three groups, learning disabled, behavior disordered and reading handicapped, were enrolled in fourth through eighth grades and each consisted of 26 boys and 14 girls. All subjects were of normal intelligence, and each student was at the third grade reading recognition level as measured by the Wide Range Achievement Test. Because of prior retentions and poor reading progress, most subjects were at least two years below the reading level for their ages.

The resulting data were subjected to analysis of variance techniques to determine if statistically significant differences existed between the groups. The least significant difference multiple comparison technique was then used to isolate specific group differences.

Results showed that the reading handicapped group scored significantly higher than either of the other groups, and no significant difference was found between the learning disabled and behavior disordered groups in areas of syntax and morphology. No significant differences were noted between any of the groups on measures of vocabulary and semantic skills. It was suggested that the deficit in morphologico-syntactic skills may contribute to the necessity for special education placement of the learning disabled and behavior disordered child. On the other hand, the reading handicapped child is able to cope with placement in the regular classroom because of his relative strength in those language skills.

Implications for educational programming include providing learning disabled students with instruction specifically designed to improve skills in syntax and morphology, and exploration of the cloze procedure as a useful method of determining language competence. Further research was suggested regarding cloze procedure application and its relationship to effective factors.

SPELLING AND MONITORING SKILLS IN ELEVEN, TWELVE, AND THIRTEEN YEAR-OLDS WITH AND WITHOUT LEARNING DISABILITY Order No. 7813588

SCHAMBER, Richard George, Ph.D. The University of Arizona, 1978. 150pp. Director: Corrine E. Kass

This study attempted to differentiate between learning disability and non-learning disability in 11-, 12-, and 13-year olds by studying monitoring skills, which were hypothesized to be deficient in students with learning disability.

Four tasks involving monitoring of self-generated or externally generated errors were designed and administered: (1) Task One: Spelling and Monitoring, (2) Task Two: Five-Alternative Forced Choice, (3) Task Three: Homonyms, and (4) Task Four: Spelling Discrimination. Monitoring was defined as the process of observing a sequence of elements (letters) to detect errors in spelling. The task data collected were submitted to statistical treatments and to signal detection analysis.

After the tasks were administered in the students' regular classrooms, students were divided into groups, using school records and test data. Those students who were receiving services for children with learning disability and who were confirmed as learning disabled by expert judgment comprised Group I. Group II (control) was comprised of non-learning disabled/poor spellers matched with the learning disabled students on age, intelligence, and spelling ability as measured by the spelling subtest of a standardized achievement test. A second control group was comprised of non-learning disabled/good spellers, also matched on relevant variables.

The research suggests that signal detection theory may be efficaciously applied to the study of students with learning disability, in the student's own classroom. The analysis of the results of task administration suggests that: 1. On Task One, the non-learning disabled/good spellers did not make enough errors to warrant data analysis. The index of sensitivity (d') did not differentiate between the non-learning disabled/poor spellers and the learning disabled. 2. The index of sensitivity (d') used in Task Two differentiated learning disability from non-learning disability. 3. Ability in comprehending homonyms (Task Three) was an effective discriminator of learning disability, since subjects who were non-learning disabled but poor in spelling were proficient at using meaning clues. The results of this task suggest that youngsters with learning disability not only have trouble in spelling, but also in the use of meaning clues. 4. Ability in differentiating the correct spelling from four incorrect spellings of a word (Task Four) was an effective discriminator of learning disability, since in general non-learning disabled/poor spellers were more adept at making use of visual clues than learning disabled subjects. 5. Analyzing types of error in a spelling discrimination task (Task Four) may give diagnostically valuable information regarding learning disabled children. While the learning disabled students were differentiated from the non-learning disabled in each of the separate analyses of the four types of spelling errors studied (errors of omissions, substitutions, transpositions, and additions of letters), the most effective discriminators of learning disability from non-learning disability were errors of omissions and substitutions of letters. However, when treating the four types of errors in concert via a multiple discriminant function analysis, the type of error which contributed most to the effective differentiation of the groups was the error of transpositions.

THE ACADEMIC AND BEHAVIORAL CHARACTERISTICS OF SUCCESSFUL VERSUS NONSUCCESSFUL LEARNING DISABLED STUDENTS Order No. 7811627

SILBER, Carolyn Linda, Ph.D. North Carolina State University at Raleigh, 1978. 149pp. Supervisor: Rachel Rawls

The purpose of this study was to investigate systematically some of the academic and behavioral characteristics of learning disabled children who were categorized as "successful" or "nonsuccessful" by their learning disability teachers.

The Ss were 61 students with identified, learning disabilities and 30 control students attending six elementary schools. PIAT's, student self ratings, and LAR's were administered to all Ss. Demographic information and previous test scores were obtained from the school files. A Learning Disability Severity Index was completed by the learning disability teachers.

Observational data was collected by three trained raters using the modified Bryan and Wheeler (1972) behavioral codes. Each of the selected LD students were observed at 10 second intervals for five minute periods on each of three days both in the resource room and again during Language Arts in a regular classroom. Each control subject was observed during Language Arts on the same three days.

The overall results of this study indicated:

(1) There were no differences between "successful" and the "nonsuccessful" groups at the beginning of the intervention program by age, entering academic achievement, race or sex. The "successful" group had a mean IQ of 94 compared to a mean IQ of 86 for the "nonsuccessful" group.

(2) More third and fourth graders were selected as "nonsuccessful" LD students whereas the "successful" group was evenly distributed throughout the six grades.

(3) SES differences were found between LD students categorized as "successful" and "nonsuccessful".

(4) There were no significant differences between "successful" and "nonsuccessful" students on the behavior codes in either the resource or regular classroom.

(5) There were no differences on task-oriented behavior between the resource and regular classroom. In the resource room, LD students engaged in more interaction with teachers and peers about academic matters and less nonproductive behavior than in the regular classroom.

(6) The LD students' behavior was found to be significantly different from normal controls in the regular classroom. They were less task oriented, engaged in more non-productive activity, conferred more with teachers and peers about academic matters and were slightly more socially disruptive.

(7) The learning disability teachers did not spend more time in remediation or make more parental contact with the "successful" group compared to the "nonsuccessful" group.

(8) There were no significant differences found between the two LD groups on locus of control.

(9) LD students as a group rated themselves as making significantly more improvement in the resource room than in the regular classroom.

These results were interpreted as follows:

Learning disability students as a group have an attentional deficit, defined as on task behavior, that was altered by including them in a learning disability resource program. Theoretical and practical educational implications were discussed in terms of the advisability of mainstreaming the LD students. Ways of altering attentional deficits of LD students were also discussed.

Although learning disability teachers were ostensibly able to discriminate between the categories of success and nonsuccess on the Learning Disability Severity Index, such a distinction was not reflected in the two groups' overt behavior.

PLAY BEHAVIORS, TEST SCORES, AND TEACHER RATINGS AS THEY RELATE TO READING AND READINESS FOR READING Order No. 7810988

STOKES, Anne Dorothy, Ed.D. The University of Florida, 1977. 173pp. Chairman: William Hedges

In examining the relationship between play behaviors and reading behaviors in young children, this study was based on theories of play and research corroborating play as a cognitive behavior with symbolic aspects. Just as play is the primary cognitive/symbolic activity of the preschooler, learning to read is the primary cognitive/symbolic activity of the early school years. However, few studies have been designed to explore this relationship directly. The fact that in play the child uses toys and actions as symbols of thought and meaning, while in reading the printed word is used for this purpose, suggests the development of a common symbolic capacity. Conceivably, play skill development should be reflected in reading skill development.

The questions addressed by this study were: 1. Is there a relationship between behaviors observed during free play in the kindergarten and reading readiness as assessed by the Metropolitan Readiness Test (MRT)? 2. Is there a relationship between behaviors observed during free play in the kindergarten and the first grade teacher's judgment of reading achievement? 3. What is the relationship between kindergarten teacher's ratings of readiness and both the scores from the MRT and the first grade teacher's judgment of reading achievement?

Based on developmental play theory, an observation instrument was devised to include the variables, forms and levels of play as well as the approach to and involvement in play activities. Eighty-two kindergarten children were observed. In addition, the teachers rated the children on high/medium/low on categories which included pre-reading skill development and dramatic or constructive play skills, involvement, and problem-solving ability. To obtain measures of reading readiness and reading achievement, the MRT was administered to all subjects and, one year later, end-of-the-year level of reading achievement was judged by the first grade teachers.

Pearson product-moment correlations showed no significant relationship between either play levels or time spent in dramatic play and the MRT scores. Similarly, correlations of a developmental play mean with the MRT were not significant. It was concluded that neither play level, play mean, nor dramatic play behavior as coded in this study was significantly related to reading readiness.

Discriminant analyses showed that the MRT could accurately classify 75 percent of the students according to first grade reading level while play level could accurately classify only 47 percent and teacher ratings, 64 percent. However, both separate play variables and play levels in combination with teacher ratings were found to be more accurate than the ratings or play variables alone as classifiers of first grade level.

Using discriminant analysis, a combination of separate play variables and teacher ratings was found which was more accurate than the MRT in classifying students according to first grade reading level. Two of the variables are teacher ratings: (1) pre-reading skill, and (2) problem-solving in play situations. These two teacher ratings are combined with observational coding of time spent in (3) problem-solving behavior characterized by a reflective style, (4) dramatic play which is logically sequenced, and (5) games-play. These five variables provide an 81 percent accuracy in classifying students according to first grade reading achievement. An index formulated from the five classification functions can be used to compute the reading level the student will most likely achieve.

The findings of this study undergird earlier theories of play as a cognitive activity and point up the significance of its relationship to reading. While the index may have greater theoretical than classroom usefulness, the isolation of specific aspects of play development worthy of study can be of importance to teachers.

THE RELATIONSHIP OF LANGUAGE ABILITIES AND READING PERFORMANCE FOR ADOLESCENT DISABLED READERS AND ABLE READERS AT TWO GRADE LEVELS Order No. 7811072

TOOKER, Nancy Miller, Ed.D. Oklahoma State University, 1977. 102pp.

Scope and Method of Study: This study was designed to investigate whether the language ability of disabled readers reflects their level of reading performance. The relationship of selected language abilities and reading performance was examined for disabled tenth grade readers and able fourth grade readers reading at the same grade level, and for able tenth grade readers. The four reading and language skills selected for investigation were silent reading comprehension, vocabulary, verbal comprehension and syntactic maturity. Sixteen variables chosen to measure these abilities were obtained from

selected subtests of the following instruments: Gates-McGinitie Reading Tests, Peabody Picture Vocabulary Test, Wechsler Intelligence Scale for Children – Revised, and Hunt's Instrument for Syntactic Maturity. In addition, free writing passages were analyzed using the Dale-Chall Readability Formula.

After screening tenth and fourth graders in one North-central Oklahoma city, a final sample was identified of ninety students who fell within the average range of intelligence on the nonverbal battery of the Lorge Thorndike Intelligence Test, and whose silent reading comprehension score met the criteria for placement in one of three reading ability groups; able fourth grade readers; disabled tenth grade readers, and able tenth grade readers.

Pearson product-moment correlation coefficients were used to determine the relationships of the language variables measured to reading performance for all tenth graders and for each of the three reading groups. Fisher's transformation to Z was utilized to determine significant differences between correlations across the groups. Point biserial correlations were used to identify the relationship of the selected language abilities to reading performance between groups, and t-tests were computed to determine the significance of these relationships.

Findings and Conclusions: A strong relationship between silent reading performance and the selected language ability variables was established for the tenth grade students sampled. Significant correlations were derived between silent comprehension and fourteen of the sixteen language variables for the tenth grade students sampled.

Examination of the consistency of the relationships of language abilities to reading performance for the subjects within the reading groups indicated that with the exception of expressive vocabulary, no significant relationships were found within the fourth grade group. No significant relationships were reported for the tenth grade disabled readers. However, the five variables of reading vocabulary, information, similarities, verbal comprehension and clause length were significantly related to reading performance within the able tenth grade reading group. For all other language variables no significant relationships were reported.

Observations and descriptions, including grade score and test age equivalents for the three sample groups were discussed. Both groups of able readers performed at or above expected levels, whereas the disabled group placed at levels consistently below grade expectancy.

Significant relationships were found between the mean language variable scores for able fourth grade readers and disabled tenth grade readers performing in the same range of reading ability. In relation to the other groups, the average performance of disabled readers on measures of vocabulary, verbal comprehension and syntactic maturity fell midway between the performance of able fourth and tenth grade readers.

Four major points may be drawn from this study. First, there is a strong link between reading and language skills beyond the elementary grades. Second, adolescent disabled readers are not as proficient in the language skills assessed as able readers at the same grade level. Third, developmental variations may exist in the magnitude and importance of the relationship between reading performance and specific language abilities at different stages of maturation and reading levels. Fourth, while the language ability of disabled tenth grade readers is not limited to the same level as their reading performance, vocabulary and writing skills tend to level off at a grade level close to 7.0.

A COMPARISON OF GOOD AND POOR READERS' ABILITY TO UNDERSTAND EXPLICIT AND IMPLICIT INFORMATION IN SHORT STORIES BASED ON TWO MODES OF PRESENTATION Order No. 7812252

WEISBERG, Renée K., Ph.D. Temple University, 1978. 181pp. Chairman: Dr. Roy A. Kress

The purpose of the study was to investigate whether good and poor readers differed in their ability to understand explicit and implicit information in short stories and whether any differences found could be attributed to the mode (aural or visual) in which the stories had been presented. Comprehension was assessed by free recall and probed recall tasks. Comprehension abilities probed were facts and three types of inferences: presuppositions, causes, and logical consequences.

Comprehension is constructed from the interrelationship of the message with one's prior knowledge. The use of prior knowledge in comprehension can be inferred from inferences subjects generate from the message.

The subjects were 32 good and 32 poor readers in fourth grade. In each reader group, 16 subjects heard six tape-recorded stories and 16 subjects read the same six stories silently. After hearing or reading each story, subjects retold the story. Free recall protocols were scored for the number of idea units recalled, the amount of explicit information, and the amount of implicit information recalled. Explicit information contained idea units plus cues to relationships, elements in stories which expressed relationships between sentences. Probed recall followed the free recall task. Eight questions were asked about each story: 2 factual and 6 inferential (2 questions for each of the three types of inferences).

Results of three analyses of variance indicated that: (1) Good readers recalled significantly more idea units from short stories than did poor readers. (2) There was no significant difference between the two modes of presentation and there was no interaction between type of reader and mode of presentation. (3) Good readers recalled significantly more explicit and implicit information than did poor readers. (4) Mode of presentation was not a significant main effect. (5) There was a significant interaction between type of reader and type of information, in that good readers recalled significantly more explicit information than did poor readers but there was no significant difference between the two groups in their recall of implicit information. (6) Good readers answered significantly more questions correctly than did poor readers. (7) Post hoc analysis of the significant main effect for type of questions revealed that logical consequences were significantly different from the categories of presuppositions and causes. The category of facts was not different from the other two categories. (8) Post hoc analysis of the interaction between type of reader and type of question indicated that good readers answered significantly more questions correctly measuring logical consequences than they did in the other three categories. Poor readers answered significantly fewer questions measuring causal relations than they did in the three other categories.

Conclusions from the study indicated a general language deficit in poor readers. Mode of presentation did not contribute to comprehension differences between good and poor readers. Recall protocols indicated that good readers seemed to use the structure of passages as an aid to their recall, but poor readers did not. The category of causal relations was least well understood by poor readers indicating their inability to understand clearly relationships among ideas in passages. Conclusions inferred from the data at the macro-level of analysis suggested that poor readers did not seem to use their prior knowledge effectively to encode a specific situation. Differences at the micro-level of analysis seemed to include less specific and less complete verbal coding by poor readers, and therefore, less accurate semantic coding of concepts necessary for answering specific questions. Processing differences between good and poor readers suggest that comprehension is a recursive process, in that both macro and micro-levels of processing are required for understanding the message.

EFFECTS OF NON-FILLED AND FILLED TIME ON AUDITORY AND VISUAL MEMORY TASKS WITH LANGUAGE AND LEARNING DISABLED CHILDREN AND NON-LANGUAGE AND NON-LEARNING DISABLED CHILDREN
Order No. 7815606

WILSON, Connie Scherra, Ph.D. Texas Woman's University, 1977. 123pp.

The purpose of this study was to investigate the effects of language and learning disabled and non-language and non-learning disabled students of filled (distraction task) and non-filled time on auditory and visual memory tasks. This was also investigated across five age groupings, 8-9, 10-11, 12, 13, 14-15, and on vocal or visual motor responses.

The subjects were 50 language and learning disabled students and 50 non-language and non-learning disabled students in voluntary attendance in private, full-time day programs. All subjects received eight trials in combinations of auditory and visual presentation, with filled and non-filled time between presentation of the words and request for response, and vocal visual motor response. Words were chosen randomly from the Lorge-Thorndike 10,000 most common words across five grade levels. Each child viewed words at his independent reading level. Words were presented by carrousel-type slide projector visually; words were presented vocally by tape recorder. Vocal responses were recorded; visual-motor responses were written on student worksheets. Criteria for correct responses were presented.

A 2 x 5 x 2 x 2 x 2 analysis of variance confirmed the hypotheses that the non-language and non-learning disabled children received significantly higher numbers of correct responses than the language and learning disabled children; visual presentation yielded a significantly higher number of correct responses; non-filled time yielded a significantly higher number of correct responses; and vocal responses yielded a significantly higher number of correct responses. There were no significant interactions between the student classification and age groupings; between classification and levels of presentation; between classification and time between presentation and response; between classification, time between presentation and response and age groupings; and between classification and levels of response. Two interactions which were not predicted did occur. They were: between time between presentation and response and type of response; and between method of presentation, time between presentation and response, and type of response.

Overall review indicated both classification of students received higher mean numbers of correct responses under visual presentation, non-filled time and vocal response. However, in any age comparison, consistently the language and learning disabled students scored lower than the non-language and non-learning disabled student within each factor. The age factor was significant at the .05 level, F (4, 90) = 2.4812, $p < .05$. Implications of these results indicate additional methods of assisting the language and learning disabled child in memory skills need to be incorporated into the learning situation.

THE COMPREHENSION OF SYNTACTIC STRUCTURES WHEN PRESENTED IN VISUAL AND AUDITORY-VISUAL MODES TO A SELECTED GROUP OF ADOLESCENT DISABLED READERS
Order No. 7810159

YOUNG, Ethel Earl, Ph.D. Michigan State University, 1977. 102pp.

Purpose of the Study

The purpose of this study was to obtain, analyze, and compare data regarding syntactic structures that contribute to the listening and reading comprehension of disabled readers. The study focused on two major problems: (1) the relationship between comprehension of syntactic structures when presented in a visual mode and a visual-auditory mode and (2) the relationship between general verbal ability and comprehension of syntactic structures and nonverbal ability and comprehension of syntactic structures.

Sample

Thirty-six eighth and ninth graders who had been identified as reading three and four years below grade level placement by the Total Reading score on the Metropolitan Achievement Test, Form F (1971) and had obtained between 4.0 and 6.0 on the Word Knowledge subtest of the Metropolitan Achievement Test, Form F (1971) composed the sample.

Instruments

The Word Knowledge subtest of the Metropolitan Achievement Test, Form F (1971) was used to assess word recognition and general verbal ability. The Mathematics: Computation subtest of the Metropolitan Achievement Test, Form F (1971) was used to assess nonverbal ability. Selected items from A Test of Sentence Meaning (Marcus, 1969) were used to measure comprehension of syntactic structures when presented in a visual mode and parallel items constructed by the investigator were used to measure comprehension of syntactic structures when presented in a visual-auditory mode.

Methodology

Students were tested in two 35-minute sessions on comprehension of syntactic structures when presented in a visual mode and in two 55-minute sessions on comprehension of syntactic structures when presented in a visual-auditory mode.

Major Findings

The statistical tests supported the following findings: 1. There were significant differences in comprehension among eight syntactic structures when presented in a visual mode. 2. There were significant differences in comprehension among eight syntactic structures when presented in a visual-auditory mode. 3. There was a significant difference between comprehension of syntactic structures when presented in a visual mode and a visual-auditory mode. 4. There was no significant relationship between general verbal ability, as determined by a test of synonyms, antonyms and word classification, and comprehension of syntactic structures. 5. There was a significant relationship between nonverbal ability, as measured by mathematic computation, and comprehension of syntactic structures.

Implications

The data pertinent to the present study indicated the following: 1. Teachers should be aware that some syntactic structures are more difficult for students to comprehend than other structures. 2. Skill in syntactic comprehension should be included as an objective of reading instruction. 3. Methods that use the visual-auditory mode as well as the visual mode should be included in instruction of syntactic structures. 4. The relationship between computational skills and syntactic comprehension should be explored further.

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